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TRAFFIC SPEED REPORT No. 90

JUNE 1973 – NUMBER 11

BY

W. LAW
G. K. STAFFORD
W. B. LUTTRELL

JHRP

JOINT HIGHWAY RESEARCH PROJECT
PURDUE UNIVERSITY AND
INDIANA STATE HIGHWAY COMMISSION

TRAFFIC SPEED REPORT NO. 90

TO: J. F. McLaughlin, Director
Joint Highway Research Project

June 13, 1973

File: 8-3-3

FROM: H. L. Michael, Associate Director
Joint Highway Research Project

Project: C-36-10C

The attached Progress Report No. 90 on Traffic Speeds is the report of the 1972 study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, 4-lane and 2-lane highways in Indiana. The report has been prepared by Mr. W. K. Law, a Graduate Instructor in Research on our staff, under the direction of Professor H. L. Michael. The data were collected by Messrs. G. K. Stafford and W. B. Luttrell of our staff.

The results indicate an increase of 0.33 mph in the average speed of all passenger cars and an increase of 0.79 mph for heavy trucks to that of the 1971 study. A simple linear repression analysis over the last eleven years (1962-72) indicated that there has been an increasing trend in speed for most classifications of vehicles and highways of between 0.5 and 1.0 mph per year. Speed values for the past few years, however, indicate that the increasing trend is less today than it was five or six years ago.

Copies of this report are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Office of Traffic Safety as a normal procedure for these reports. Copies will also be sent to the Federal Highway Administration and several departments within the ISHC. The report is presented for the record and for release as noted.

Respectfully sumbitted,

Harold L. Michael

HLM:mw

Harold L. Michael
Associate Director

cc: W. L. Dolch
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W. H. Goetz
M. J. Gutzwiller
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Progress Report

TRAFFIC SPEED REPORT NO. 90

by

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Graduate Instructor in Research

George K. Stafford
Traffic Engineering Technician

and

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Instruments Technician

Joint Highway Research Project

File No.: 8-3-3

Project No.: C-36-10C

Purdue University
Lafayette, Indiana
June 13, 1973

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ABSTRACT

This report is the annual continuing study of speeds of vehicles on rural Indiana Highways. Observations of spot speeds were taken on Interstate, four-lane, and two-lane highways throughout the state during the months of June, July and August 1972.

Analysis of the speeds showed the overall average speed for passenger cars was 65.20 miles per hour. The overall average speed for heavy trucks was 57.56 miles per hour. This was 0.33 mph more for passenger cars and 0.79 mph more for trucks than similar data given for 1971 at the same locations (except for station 10 which had been shifted 0.8 mile northward).

Simple linear repression analysis shows an overall 0.75 mph increase of speed for all classification of vehicles and highways over the last 11 years. This trend is a bit less than that of a ten year period ending five or six years ago and appears to result from a "leveling-off" of maximum speeds in recent years.

TRAFFIC SPEED REPORT NO. 90

This report is an analysis of spot speed observations. made during June, July and August 1972. All observations were made of free-flowing vehicles on level, tangent sections of rural highways during daylight and under favorable conditions. The same locations on selected Federal and State highways as used in 1971 were used again except for Station 10, which has been moved 0.8 miles northward to as equivalent a site as possible to the original site. All other locations except station 9 have been the same for many years. Stations were classified as two-lane, four-lane, or interstate highways. A representative sample of spot speeds was obtained at each of the four stations in each classification. The site locations were as follows: (See Figure A)

Interstate Highways

1.	I-69	3.3 miles south of Junction SR 18
2.	I-65	1.0 mile west of Junction SR 334
3.	I-74	1.0 mile east of Junction of Post Road
4.	I-65	7.5 miles north of Junction of SR 160

Four Lane Highways

5.	U.S. 31	1.2 miles south of Junction of SR 38
6.	U.S. 52	1.0 mile east of Junction of SR 28
7.	U.S. 41	1.0 mile north of South Junction of SR 2
8.	U.S. 52	1.0 mile west of Klondike

Two Lane Highways

9.	U.S. 35	1.5 miles east of Junction of I-69
10.	S.R. 43	1.2 miles south of Chalmers
11.	U.S. 31	3.0 miles south of Rochester
12.	S.R. 25	0.7 miles west of Americus

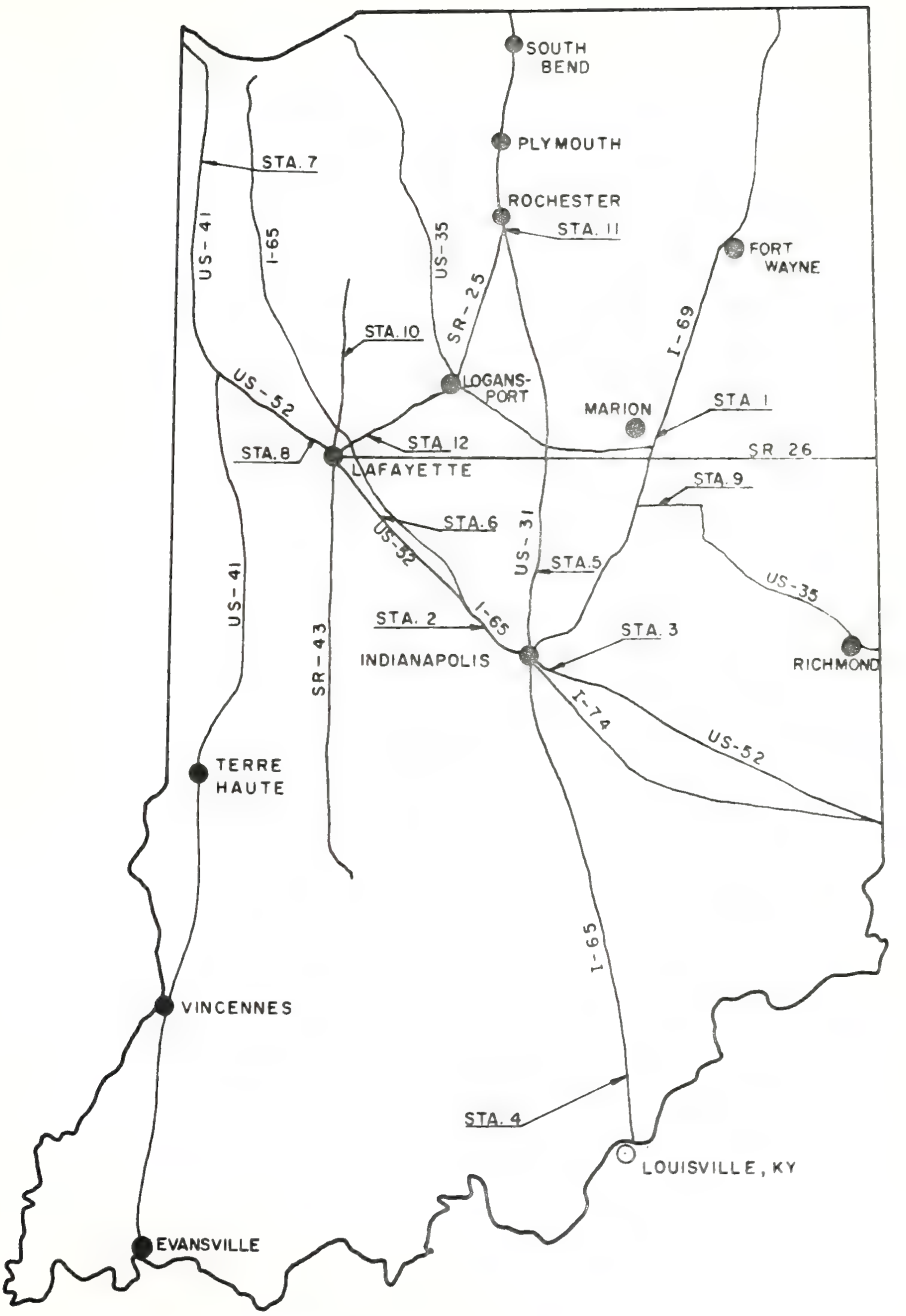


FIG. A - LOCATIONS OF SPEED-STUDY STATIONS

The vehicles were classified as Indiana or Non-Indiana Passenger Cars and Light (less than 5000 lbs. gross weight) or Heavy (equal to or more than 5000 lbs gross weight) Trucks. The analysis was performed as classified and combined, passenger cars or trucks.

The maximum speed limits in Indiana are as follows: 70 mph on interstate highways and 65 mph on other rural highways unless otherwise posted. The state limits were applicable at all stations of this study except for Station 11 which had been posted at a 60 mph limit. This lower speed limit appeared to have little effect on the traffic speeds (See Table 11).

Equipment and Field Procedure

The observations for this study were obtained by use of an "Electromatic" Rada Speed Meter. The meter was placed approximately four feet from the edge of the pavement at angles less than 10^{o} with the highway center line. No corrections of speeds were necessary at these small angles. At the beginning of the study the accuracy of the meter was checked and any constant discrepancy of readings was corrected accordingly.

Results of Analysis

The data collected were analyzed and summarized in Table 1 to 12 in the Appendix. Tables 13, 14 and 15 summarize the data for interstate, four lane, two lane highways respectively. Table 16 is the summary for all highways.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

	Interstate	Four Lane	Two Lane
Passenger Cars:			
Indiana	69.11	64.31	61.97
Non-Indiana	69.55	64.32	62.41
85 Percentile (all)	74.37	70.94	68.69
Trucks			
Less than 5000 lbs.	63.67	59.37	58.25
5000 lbs or more	60.93	55.19	55.62

The percent of vehicles exceeding the speed limit for each classification of vehicles and each type of highway was as follows:

	Interstate	Four Lane	Two Lane
Passenger Cars:			
Indiana	41.96	45.50	29.47
Non-Indiana	43.22	48.47	32.17
Trucks			
Less than 5000 lbs.	13.64	23.08	14.12
5000 lbs or more	3.95	4.26	4.55

The percent of vehicles traveling 5 mph or more above the speed limit for each case was as follows:

	Interstate	Four Lane	Two Lane
Passenger Cars:			
Indiana	13.78	18.20	11.10
Non-Indiana	12.71	20.25	7.83
Trucks:			
Less than 5000 lbs.	3.03	10.26	3.39
5000 lbs or more	0.00	0.43	0.41

The results of this study and similar studies conducted since 1962 are tabulated in Table A. A simple linear regression analysis on these results was conducted and a summary is given in Table B.

A linear relationship between speed and year was assumed with β the estimated slope of the straight line. Four hypotheses were tested ($\beta = 0.5$, $\beta = 0.75$, $\beta = 1.0$ and $\beta = 1.5$) in order to place values on annual trends. It was found that an increase of a 0.75 mph/year trend existed for all cases at the 95% confidence level.

A graphical representation of Table A and B is given in Figure B.

TABLE A

SUMMARY OF SPOT SPEED OBSERVATION ON INDIANA HIGHWAYS

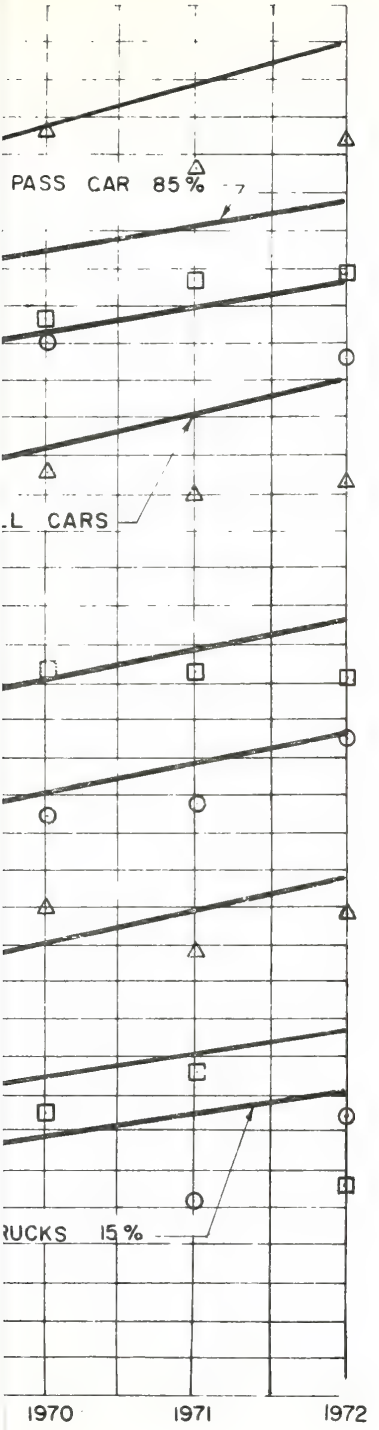
(Free-moving Vehicles on Level, Tangent Sections)

		Passenger Cars				Trucks		
		Ind. Mean	Non-Ind. Mean	All Mean	All 85%	Light Mean	Heavy Mean	All Mean
Two-Lane Highways								
Aug.	'62	56.7	57.5	57.0	63.7	53.1	49.3	50.1
June	'63	56.9	57.7	57.2	64.0	52.3	47.9	49.7
July	'64	59.1	60.1	59.5	66.6	53.9	51.7	52.4
Sept.	'65	58.2	57.9	58.1	64.6	54.3	50.6	51.7
Sept.	'66	60.1	59.5	59.9	65.5	55.4	50.8	52.0
Aug.	'67	61.0	61.9	61.3	68.0	53.8	51.9	52.7
June	'68	61.2	62.4	61.5	68.1	54.4	54.2	54.3
July	'69	64.7	64.6	64.7	71.9	60.5	55.9	57.9
July	'70	62.3	62.8	62.3	68.9	59.0	54.8	56.7
July	'71	61.4	60.9	61.3	68.0	58.0	54.0	55.6
June	'72	62.0	62.4	62.0	68.7	53.3	55.6	56.7
Four-Lane Highways								
Aug.	'62	59.2	59.3	59.2	65.8	54.7	51.3	51.9
June	'63	60.4	60.6	60.5	66.3	55.0	48.6	51.3
July	'64	61.3	63.0	62.0	69.4	55.1	54.5	54.7
Sept.	'65	60.1	62.2	61.0	67.2	55.5	53.1	53.7
Sept.	'66	63.1	64.3	63.5	69.0	58.7	52.8	54.2
Aug.	'67	64.3	65.7	65.0	70.3	57.0	54.0	54.9
June	'68	64.2	66.2	64.9	70.4	58.4	55.4	56.2
July	'69	67.7	68.3	67.9	74.6	64.0	58.0	59.6
July	'70	64.6	64.3	64.5	70.6	59.7	55.0	54.2
July	'71	64.3	65.4	64.7	70.7	59.8	56.4	57.4
June	'72	64.3	64.3	64.3	70.9	59.4	55.2	57.1
Interstate Highways								
Aug.	'62	58.7	59.1	58.8	65.6	55.8	52.7	53.2
June	'63	59.7	61.2	60.3	66.3	55.2	51.5	52.7
July	'64	61.9	64.0	62.7	70.5	56.8	54.6	55.2
Sept.	'65	61.2	62.1	61.5	67.7	54.9	53.6	53.9
Sept.	'66	62.1	63.3	62.5	68.5	56.1	54.9	55.3
Aug.	'67	66.4	68.3	67.1	73.6	60.0	56.9	57.5
June	'68	66.2	67.9	66.8	72.4	60.5	57.9	58.5
July	'69	70.2	71.2	70.6	76.6	65.3	59.9	61.4
July	'70	69.1	69.2	69.2	74.6	63.8	59.6	60.5
July	'71	68.3	68.7	68.5	73.7	64.8	59.4	60.8
June	'72	69.1	69.6	69.3	74.4	63.7	60.9	61.8
All Highways								
Aug	'62	58.2	58.7	58.4	65.1	54.5	51.2	51.8
June	'63	59.0	59.9	59.3	65.2	54.1	49.5	51.2
July	'64	60.8	62.4	61.5	69.2	55.2	53.7	54.1
Sept.	'65	59.9	60.9	60.3	66.7	54.9	52.6	53.1
Sept.	'66	61.8	62.4	62.0	68.0	56.7	52.7	53.8
Aug.	'67	63.9	65.8	64.5	71.4	56.3	54.6	55.1
June	'68	63.8	66.6	64.5	70.8	57.2	56.2	56.5
July	'69	67.3	68.8	67.9	75.1	62.7	57.9	59.5
July	'70	65.1	66.3	65.5	72.2	60.3	56.4	57.5
July	'71	64.3	66.2	64.9	71.9	60.3	56.8	57.9
June	'72	64.8	66.9	65.2	72.2	60.1	57.6	58.6

TABLE B. SUMMARY OF SIMPLE LINEAR REGRESSION ANALYSIS*

Classification	Observ.	b_o	b_1	R^2	S_{b1}	β_{10} 0.5	0.75	1.0	1.5
Interstate Passenger Cars 85%	11	5.725	.978	.753	.187	Rej	NR	NR	Rej
4-Lane Passenger Cars 85%	11	32.446	.552	.508	.181	NR	NR	Rej	Rej
2-Lane Passenger Cars 85%	11	27.265	.595	.626	.153	NR	NR	Rej	Rej
Mean of All Passenger Cars	11	10.657	.783	.759	.147	NR	NR	NR	Rej
Mean of All Light Trucks	11	6.196	.765	.765	.141	NR	NR	NR	Rej
Mean of All Heavy Trucks	11	3.675	.758	.828	.115	NR	NR	NR	Rej
Interstate Heavy Trucks 15%	11	-6.135	.842	.876	.106	Rej	NR	NR	Rej
4-Lane Heavy Trucks 15%	11	20.875	.395	.371	.171	NR	NR	Rej	Rej
2-Lane Heavy Trucks 15%	11	6.498	.587	.665	.139	NR	NR	Rej	Rej

*All tests at 5% level of significance; H_o: $\beta_1 = \beta_{10}$; $t = \frac{b_1 - \beta_{10}}{s_{b1}}$; Rejection Region: $|t| \geq t(0.975.9)$; Rej = H_o rejected; NR = H_o not rejected.



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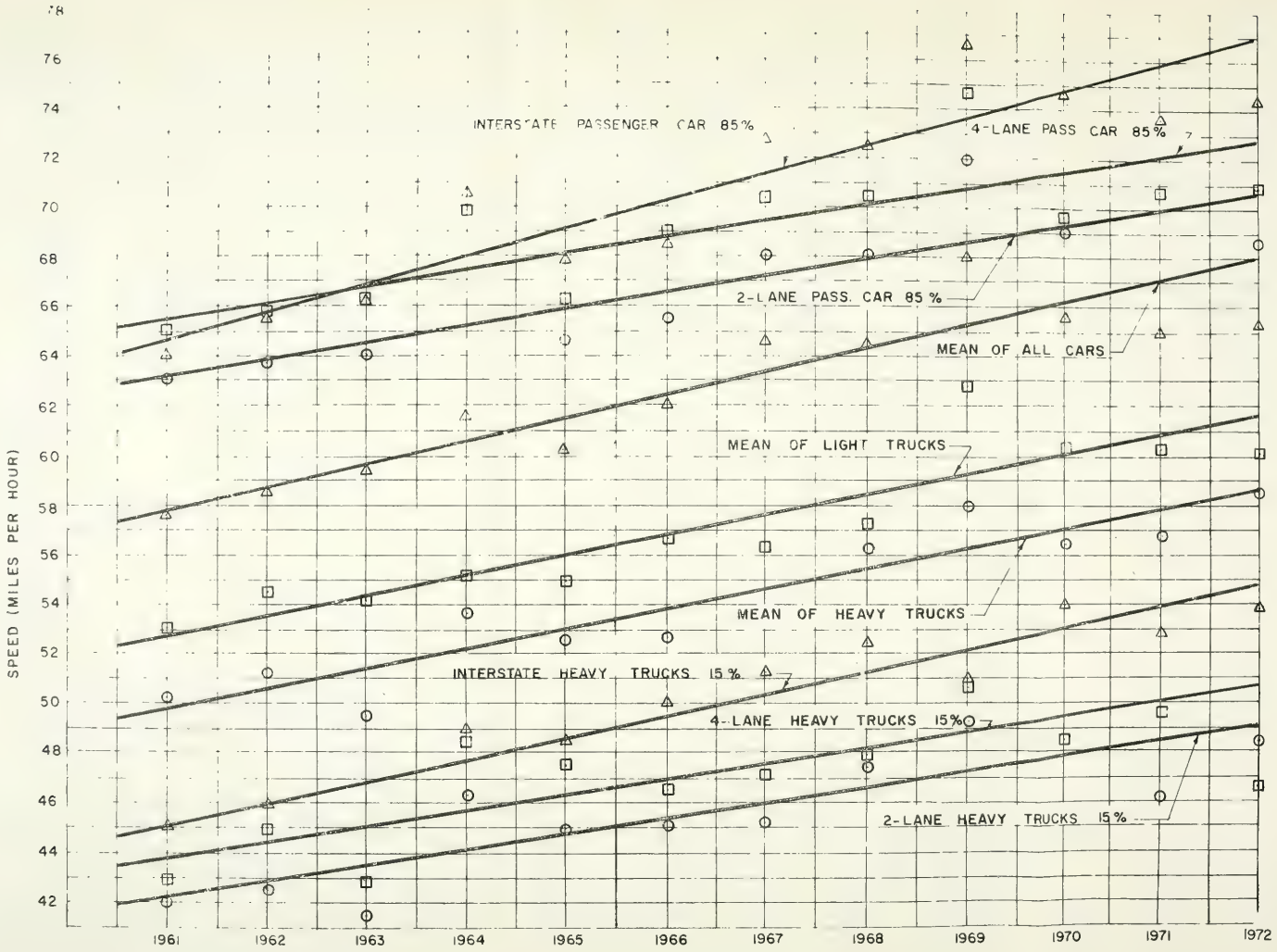

FIG. B – INDIANA RURAL SPEED TRENDS

Summary and Conclusions

The average speeds in this study were found to be 0.33 mph higher for passenger cars and 0.79 mph higher for heavy trucks than the results of 1971.

The simple linear repression on the results of the past eleven years (1962-1972) concluded at 95% confidence level that:

1. There has been a 0.75 mph/year average annual speed increase for the following nine classifications:
   a. Interstate Passenger Cars 85-percentile,
   b. 4-lane Passenger Cars 85-percentile,
   c. 2-lane Passenger Cars 85-percentile,
   d. Mean of all passenger cars,
   e. Mean of all light trucks,
   f. Mean of all heavy trucks,
   g. Interstate Heavy Trucks 15-percentiles,
   h. 4-lane Heavy Trucks 15-percentiles,
   i. 2-lane Heavy Trucks 15-percentiles.
2. The speeds of the past 5 years indicate that the increases during this period have leveled off compared with the period 1961-1967.

The increase in mileage of high type highways such as the interstate system and the growing percentage of vehicles violating current maximum speed limits tend to support the belief that drivers select the travel speeds they consider safe irrespective of the maximum speed limits.

Determination of Sample Size

It was desired that a 95% confidence interval of the true mean of the speed of passenger cars should not be wider than 2mph. For trucks weighing 5,000 lbs. or more a 95% confidence interval with a 4 mph band was desired.

Assuming a normal distribution of speeds and using the standard deviation of the 1971 data, the minimum sample size requirements were determined by:

For Passenger Cars:

$$N = \left[\frac{2 \times 1.96 \times 7.49}{2}\right]^2 = 216 \text{ observations}$$

For Heavy Trucks:

$$N = \left[\frac{2 \times 1.96 \times 6.64}{4}\right]^2 = 42 \text{ observations}$$

NOTE:

At all stations, at least 330 passenger car observations and 46 heavy truck observations were obtained for the study reported herein.

APPENDIX B

Speed Data (Tables 1 to 16)

TABLE 1 SPEED DATA

Station 1 Highway I-69 Location 3.3 Miles South of S.R. 18

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Partly Cloudy

This Observation
Date July 18, 1972
Time 10:25-12:10 p.m.

Last Previous Observation (Speed Report No. 89)
Date August 12, 1971
Time 11:50-1:00 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	284	287	160	178	124	109	108	105	20	31	88	39
	Ave. speed (m.p.h.)	69.22	68.96	69.06	69.07	69.44	68.78	60.31	60.44	66.45	61.77	58.91	59.88
	Standard deviation	6.69	6.511	7.04	6.361	6.22	6.775	7.04	6.867	6.00	6.065	6.52	7.140
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	2.3	0.0
	49 m.p.h.	0.7	0.35	0.6	0.0	0.8	0.92	7.4	9.52	0.0	3.23	9.1	12.16
	54 m.p.h.	1.8	2.79	2.5	2.25	0.8	3.67	18.5	20.00	0.0	9.68	22.7	24.32
	59 m.p.h.	6.7	8.01	8.1	6.74	4.8	10.09	40.7	40.00	10.0	29.03	47.7	44.59
	64 m.p.h.	17.3	18.47	20.6	19.10	12.9	17.43	72.2	66.67	35.0	67.74	80.7	66.22
	69 m.p.h.	50.0	51.57	52.5	52.81	46.8	49.54	92.6	95.24	70.0	93.55	97.7	95.95
	74 m.p.h.	82.0	85.02	81.9	86.52	82.3	82.57	99.1	99.05	95.0	96.77	100	100.0
	79 m.p.h.	96.8	95.47	96.3	94.38	97.6	97.25	99.1	100.0	95.0	100.0	100	100.0
	84 m.p.h.	98.2	99.30	97.5	98.88	99.2	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	98.9	99.65	98.8	99.44	99.2	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	144	143	78	90	62	54	54	53	11	14	43	39
	Average speed	70.7	70.19	71.0	70.01	70.4	70.48	62.2	64.06	63.6	63.36	61.8	64.31
Bnd	No. of vehicles obs.	144	143	82	88	62	55	54	52	9	17	45	35
	Average speed	67.8	67.72	67.2	68.10	68.5	67.11	58.4	56.75	66.7	60.47	56.2	54.94

TABLE 2 SPEED DATA

Station 2 Highway I-65 Location 1.0 Mile West of S.R. 334

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Partly Cloudy & Hot

This Observation
Date August 16, 1972
Time 3:00-4:55 p.m.

Last Previous Observation (Speed Report No. 89)
Date July 16, 1971
Time 10:30-11:20 a.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	284	285	175	226	109	59	109	109	25	31	84	78
	Ave. speed (m.p.h.)	68.56	69.38	68.28	69.45	69.00	69.10	60.24	61.53	65.32	64.52	58.73	60.35
	Standard deviation	6.50	5.324	6.95	5.510	5.69	4.574	7.33	5.808	8.36	5.983	6.29	5.325
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.7	0.0	1.1	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.2	0.0
	49 m.p.h.	0.7	0.35	1.1	0.44	0.0	0.0	6.4	0.92	8.0	0.0	5.9	1.28
	54 m.p.h.	3.2	0.70	4.0	0.88	1.8	0.0	22.9	9.17	16.0	3.23	25.0	11.54
	59 m.p.h.	10.2	2.81	12.6	3.54	6.4	0.0	46.8	39.45	25.0	22.58	53.6	46.15
	64 m.p.h.	21.8	16.84	25.1	17.26	16.5	15.25	70.6	69.72	32.0	48.39	82.1	78.21
	69 m.p.h.	50.4	50.18	49.7	48.23	51.4	57.63	88.1	88.99	64.0	77.42	95.2	93.59
	74 m.p.h.	87.0	86.32	87.4	86.28	86.2	86.44	99.1	98.7	96.0	3.55	100	100.0
	79 m.p.h.	96.5	97.54	96.6	97.79	96.3	96.61	100	100.0	100	100.0	100	100.0
	84 m.p.h.	99.3	99.65	98.9	99.56	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	1.00	100.0
Bnd	No. of vehicles obs.	141	142	81	112	60	30	55	55	12	9	43	46
Bnd	Average speed	67.9	78.74	67.7	68.64	68.3	69.10	57.6	60.51	62.1	66.33	56.3	59.37
Bnd	No. of vehicles obs.	143	143	94	114	49	29	54	54	13	22	41	32
Bnd	Average speed	69.2	70.01	68.8	70.25	69.8	69.10	62.9	62.57	68.3	63.77	61.2	61.75

TABLE 3 SPEED DATA

Station 3 Highway I-74 Location 1.0 Mile East of Post Road

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Partly Cloudly

This Observation
Date August 16, 1972
Time 12:20-2:10 p.m.

Last Previous Observation (Speed Report No. 89)
Date July 20, 1971
Time 10:00-10:45 a.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	281	281	207	204	74	77	109	110	38	51	71	59
	Ave. speed (m.p.h.)	68.00	68.77	67.96	68.41	68.14	69.71	61.51	62.93	64.32	64.29	60.01	61.75
	Standard deviation	6.49	6.153	6.70	6.650	5.91	4.483	6.96	6.100	8.45	6.703	5.52	5.303
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	49 m.p.h.	0.4	0.0	0.5	0.0	0.0	0.0	4.6	2.73	5.3	5.88	4.2	0.0
	54 m.p.h.	2.5	1.42	2.9	1.96	1.4	0.0	18.4	11.82	18.4	7.84	18.3	15.25
	59 m.p.h.	8.5	7.47	8.2	9.31	9.5	2.60	37.6	28.18	26.3	19.61	43.7	35.59
	64 m.p.h.	27.1	21.71	28.0	25.98	24.3	10.39	69.7	56.36	42.1	41.18	84.5	69.49
	69 m.p.h.	57.3	53.02	58.0	55.88	55.4	45.45	86.2	88.18	68.4	82.35	95.8	93.22
	74 m.p.h.	86.8	85.05	86.0	83.33	89.2	89.61	95.4	97.27	86.8	96.08	100	8.31
	79 m.p.h.	97.2	96.44	97.1	96.08	97.3	97.40	100	99.09	100	98.04	100	100.0
	84 m.p.h.	98.9	99.64	98.6	99.51	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	99.64	100	99.51	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	140	141	110	99	30	42	55	55	20	26	35	29
	Average speed	68.0	68.80	67.8	68.64	68.7	69.19	62.6	63.31	64.9	63.65	61.3	63.00
Bnd	No. of vehicles obs.	141	140	97	105	44	35	54	55	13	25	36	30
	Average speed	68.0	68.73	68.2	68.19	67.7	70.34	60.4	62.55	63.7	64.96	58.8	60.53

TABLE 4 SPEED DATA

Station 4 Highway I-65 Location 7.5 Miles North of S.R. 160

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Partly Cloudy & Hot

This Observation
Date August 17, 1972
Time 12:20-2:20 p.m.

Last Previous Observation (Speed Report No. 89)
Date July 8, 1971
Time 12:00-1:00 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	282	285	117	176	165	109	105	112	23	19	77	93
	Ave. speed (m.p.h.)	68.09	69.89	67.84	69.55	68.27	70.45	61.12	62.07	63.68	63.68	60.19	61.74
	Standard deviation	5.45	6.317	5.16	68.56	5.66	5.317	6.25	6.149	7.71	7.910	5.39	5.722
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	49 m.p.h.	0.4	0.35	0.0	0.57	0.6	0.0	1.0	2.68	0.0	5.26	1.3	2.15
	54 m.p.h.	1.4	2.46	0.0	3.98	2.4	0.0	14.3	12.50	10.7	15.79	15.6	11.83
	59 m.p.h.	7.8	7.37	6.8	9.66	8.5	3.67	41.0	31.25	32.1	36.84	44.2	30.11
	64 m.p.h.	24.8	16.49	26.5	19.32	23.6	11.93	72.4	60.71	53.6	42.11	79.2	64.52
	69 m.p.h.	58.9	44.56	63.3	44.32	55.8	44.95	91.4	88.39	78.6	73.68	96.1	91.40
	74 m.p.h.	90.1	80.00	91.5	81.25	89.1	77.98	98.1	99.11	92.9	100.0	100	98.92
	79 m.p.h.	98.9	94.04	98.3	93.75	99.4	94.50	99.1	100.0	96.4	100.0	100	100.0
	84 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	141	141	49	82	92	59	52	58	12	11	49	47
Bnd	Average speed	68.2	70.49	68.1	70.72	68.2	70.17	61.3	60.84	63.2	63.18	60.8	60.30
Bnd	No. of vehicles obs.	141	144	68	94	73	50	53	54	16	8	37	46
Bnd	Average speed	68.0	69.31	67.7	68.53	68.4	70.78	69.9	63.39	64.1	64.38	59.6	63.22

TABLE 5 SPEED DATA

Station 5 Highway U.S. 31 Location 1.2 Miles South of S.R. 38

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Partly Cloudy

This Observation
Date June 26, 1972
Time 11:08-1:15 p.m.

Last Previous Observation (Speed Report No. 89)
Date July 21, 1971
Time 9:50-10:45 a.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	289	279	237	243	52	36	109	116	35	47	74	69
	Ave. speed (m.p.h.)	66.41	65.35	66.80	65.30	67.46	65.64	57.72	58.92	59.80	61.21	56.73	57.36
	Standard deviation	6.34	7.054	6.39	6.959	6.08	7.765	5.81	7.270	8.34	8.772	5.75	5.589
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.9	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	2.9	0.0	0.0	0.0
	44 m.p.h.	0.0	0.36	0.0	0.0	0.0	2.78	1.8	2.59	2.9	4.26	1.4	1.45
	49 m.p.h.	0.7	1.43	0.8	1.23	0.0	2.78	9.2	7.76	11.4	8.51	8.1	7.25
	54 m.p.h.	3.8	6.09	4.6	6.17	0.0	5.56	31.2	29.31	20.0	21.28	36.5	34.78
	59 m.p.h.	13.8	17.56	15.2	18.11	7.7	13.89	58.7	51.72	42.9	40.43	66.2	59.42
	64 m.p.h.	36.3	43.37	37.6	43.21	30.8	44.44	84.4	81.03	65.7	63.83	93.2	92.75
	69 m.p.h.	70.2	75.63	71.7	76.54	63.5	69.44	99.1	90.52	97.1	78.72	100	98.55
	74 m.p.h.	90.3	90.68	91.1	91.36	86.5	86.11	99.1	99.14	97.1	97.87	100	100.0
	79 m.p.h.	97.6	97.13	97.9	97.53	96.2	94.44	100	100.0	100	100.0	100	100.0
	84 m.p.h.	99.6	99.28	99.6	99.18	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	99.64	100	99.59	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	140	139	115	115	25	24	55	53	19	17	36	36
Bnd	Average speed	66.1	63.91	66.0	63.58	66.7	65.46	59.0	56.96	62.3	57.59	57.3	56.67
Bnd	No. of vehicles obs.	149	140	122	128	27	12	54	63	16	30	38	33
Bnd	Average speed	66.7	66.78	66.4	66.85	68.2	66.00	56.4	60.57	56.8	63.27	56.2	58.12

TABLE 6 SPEED DATA

Station 6 Highway U.S. 52 Location 1.0 Mile East of S.R. 28

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Hazy & Windy

This Observation
Date June 14, 1972
Time 9:05-2:45 p.m.

Last Previous Observation (Speed Report No. __)
Date July 13, 1971
Time 1:45-2:35 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	296	283	145	240	151	43	142	104	26	58	116	46
	Ave. speed (m.p.h.)	66.32	65.79	65.52	65.68	67.09	66.42	58.29	58.72	61.62	61.47	57.54	55.26
	Standard deviation	6.03	7.915	6.14	8.095	5.84	6.874	5.98	9.043	8.05	8.810	5.16	8.180
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.35	0.0	0.42	0.0	0.0	0.0	2.88	0.0	1.72	0.0	4.35
	44 m.p.h.	0.0	0.71	0.0	0.83	0.0	0.0	1.4	6.73	3.9	1.72	0.9	13.04
	49 m.p.h.	0.7	3.18	0.0	3.33	1.3	2.33	6.3	11.54	7.7	3.45	6.0	21.74
	54 m.p.h.	3.4	9.19	3.5	9.58	3.3	6.98	26.8	29.81	19.2	22.41	28.5	39.13
	59 m.p.h.	11.2	19.08	16.6	20.00	6.0	13.95	55.6	53.85	34.6	43.10	60.3	67.39
	64 m.p.h.	33.5	37.46	40.7	37.50	26.5	37.21	87.3	75.00	57.7	67.24	94.0	84.78
	69 m.p.h.	73.7	69.96	80.7	72.08	66.9	58.14	97.2	89.42	84.6	82.76	100	97.83
	74 m.p.h.	92.9	87.99	91.7	87.50	94.0	90.70	100	96.15	100	93.10	100	100.0
	79 m.p.h.	97.0	96.82	96.6	96.25	97.4	100.0	100	99.04	100	98.28	100	100.0
	84 m.p.h.	100	99.29	100	99.07	100	100.0	100	99.04	100	98.28	100	100.0
	89 m.p.h.	100	99.65	100	99.58	100	100.0	100	99.04	100	98.28	100	100.0
Bnd	No. of vehicles obs.	141	142	67	120	74	22	72	52	13	26	59	26
	Average speed	65.8	66.19	64.5	65.91	67.0	67.73	58.0	59.02	64.1	61.69	56.5	56.54
Bnd	No. of vehicles obs.	155	141	78	120	77	21	70	52	13	32	57	20
	Average speed	66.8	65.39	66.4	65.45	67.2	65.05	58.6	58.33	58.6	61.28	58.6	53.60

TABLE 7 SPEED DATA

Station 7 Highway U.S. 41 Location 1.0 Mile North of S.R. 2

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Cloudy & Windy

This Observation
Date July 17, 1972
Time 10:33-2:35 p.m.

Last Previous Observation (Speed Report No. 89)
Date July 22, 1971
Time 9:50-11:20 a.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	281	284	199	229	82	55	109	105	27	30	82	75
	Ave. speed (m.p.h.)	63.80	63.73	63.47	63.99	64.60	62.67	56.65	55.59	59.70	57.70	55.65	54.75
	Standard deviation	7.61	8.114	7.25	8.135	8.40	.012	6.96	7.201	6.69	7.335	6.79	7.019
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	1.2	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	2.4	0.0
	44 m.p.h.	0.7	1.76	0.5	1.75	1.2	1.82	4.6	8.57	0.0	3.33	6.1	10.67
	49 m.p.h.	5.3	4.58	5.0	3.49	6.1	9.09	12.8	24.76	3.7	16.67	15.9	28.00
	54 m.p.h.	10.0	12.32	10.1	11.79	9.8	14.55	33.0	41.90	22.2	33.33	36.6	45.33
	59 m.p.h.	23.8	25.70	24.1	24.45	23.2	30.91	62.4	70.48	51.9	60.00	65.9	74.67
	64 m.p.h.	53.0	52.46	54.3	52.84	50.0	50.91	89.0	87.62	74.1	76.67	93.9	92.00
	69 m.p.h.	77.2	78.52	80.4	77.73	69.5	81.82	97.3	98.10	96.3	96.67	97.6	98.67
	74 m.p.h.	93.2	93.31	94.5	92.14	90.2	98.18	99.1	100.0	96.3	100.0	100	100.0
	79 m.p.h.	98.2	97.89	99.5	97.38	95.1	100.0	100	100.0	100	100.0	100	100.0
	84 m.p.h.	100	99.30	100	99.13	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	140	141	104	114	36	27	54	53	12	17	42	36
	Average speed	63.9	64.71	63.8	64.97	64.4	63.59	55.5	53.34	60.4	58.18	54.1	51.06
Bnd	No. of vehicles obs.	141	143	95	115	46	28	55	52	15	13	40	39
	Average speed	63.7	62.77	63.2	63.01	64.7	61.79	57.8	57.88	59.1	57.08	57.3	58.15

TABLE 8 SPEED DATA

Station 8 Highway U.S. 52 Location 1.0 Mile West of Klondike

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Partly Cloudy

This Observation
Date June 6, 1972
Time 10:00-3:30 p.m.

Last Previous Observation (Speed Report No. __)
Date July 13, 1971
Time 8:30-10:00 a.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	281	284	203	255	78	29	109	105	53	60	56	45
	Ave. speed (m.p.h.)	62.02	62.38	62.3	62.35	61.56	62.69	56.63	54.94	58.91	56.75	54.48	52.53
	Standard deviation	6.87	7.024	6.86	7.079	6.91	6.623	7.98	8.116	8.31	8.181	7.086	7.452
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.95	0.0	1.67	0.0	0.0
	39 m.p.h.	0.7	0.35	1.0	0.39	0.0	0.0	2.8	4.76	1.9	3.33	3.6	6.67
	44 m.p.h.	1.4	0.35	1.5	0.39	1.3	0.0	8.3	8.57	7.6	5.00	8.9	13.33
	49 m.p.h.	4.3	3.52	4.4	3.53	3.9	3.45	17.4	24.76	15.1	20.00	19.6	31.11
	54 m.p.h.	10.7	11.27	11.3	11.76	9.0	6.90	33.9	45.71	22.6	36.67	44.6	57.78
	59 m.p.h.	32.0	33.10	30.5	33.33	35.9	31.03	61.5	67.62	43.4	56.67	78.6	82.22
	64 m.p.h.	63.4	61.97	60.1	62.35	71.8	58.62	82.6	90.48	71.7	86.67	92.9	95.56
	69 m.p.h.	87.2	87.32	85.7	87.45	91.0	86.21	98.2	98.10	96.2	96.67	100	100.0
	74 m.p.h.	97.2	95.42	97.5	95.29	96.2	96.55	100	100.0	100	100.0	100	100.0
	79 m.p.h.	99.3	97.54	100	97.65	97.4	96.55	100	100.0	100	100.0	100	100.0
	84 m.p.h.	99.6	99.65	100	99.61	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	143	142	116	133	27	9	55	52	25	27	30	25
	Average speed	63.9	63.68	63.8	63.59	64.3	65.00	58.8	57.23	61.1	58.89	56.9	55.44
Bnd	No. of vehicles obs.	138	142	87	122	51	20	54	53	28	33	26	20
	Average speed	60.1	61.08	60.1	60.99	60.1	61.65	54.4	52.70	56.9	55.00	51.7	48.90

TABLE 9 SPEED DATA

Station 9 Highway U.S. 35 Location 1.5 Miles East of Junction I-69

No. of Lanes 2 Type of Surface Asphalt Concrete Weather Partly Cloudy

This Observation
Date July 18, 1972
Time 1:05-2:55 p.m.

Last Previous Observation (Speed Report No. 89)
Date August 12, 1971
Time 1:30-3:25 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	279	291	239	267	40	24	108	104	36	49	72	55
	Ave. speed (m.p.h.)	61.29	62.09	61.33	62.05	61.05	62.50	55.59	56.87	58.11	59.24	54.33	54.75
	Standard deviation	7.10	6.930	7.22	6.923	6.43	7.144	6.43	6.548	7.08	6.156	5.73	6.195
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.4	0.0	0.4	0.0	0.0	0.0	0.9	0.96	0.0	0.0	1.4	1.82
	44 m.p.h.	1.1	0.69	0.8	0.75	2.5	0.0	6.5	3.85	5.6	2.04	6.9	5.45
	49 m.p.h.	3.6	2.75	3.8	2.62	2.5	4.17	13.0	16.35	13.9	8.16	13.9	23.64
	54 m.p.h.	15.4	13.06	15.5	13.48	15.0	8.33	39.8	31.73	30.6	20.41	44.4	41.82
	59 m.p.h.	39.4	32.65	40.2	33.33	35.0	25.00	76.9	58.65	61.1	40.82	84.7	74.55
	64 m.p.h.	71.3	67.01	71.6	66.67	70.0	70.83	94.4	92.31	86.1	87.76	98.6	96.36
	69 m.p.h.	90.3	86.94	90.4	86.89	90.0	87.50	98.2	99.04	94.4	97.96	100	100.0
	74 m.p.h.	95.0	95.19	94.6	95.13	97.5	95.83	99.1	100.0	97.2	100.0	100	100.0
	79 m.p.h.	98.9	98.63	98.7	98.88	100	95.83	100	100.0	100	100.0	100	100.0
	84 m.p.h.	99.6	100.0	99.6	100.0	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	99.6	100.0	00.6	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	138	140	113	122	25	18	54	52	16	19	38	33
	Average speed	61.0	62.73	61.1	62.76	60.8	62.50	55.1	56.79	58.1	61.21	53.9	54.24
Bnd	No. of vehicles obs.	141	151	126	145	15	6	54	52	20	30	34	22
	Average speed	61.6	61.49	61.6	61.45	61.5	62.50	56.1	56.94	58.1	58.00	54.9	55.50

TABLE 10 SPEED DATA

Station 10 Highway U.S. 43 Location 1.2 Miles South of Chalmers

No. of Lanes 2 Type of Surface Asphalt Concrete Weather Cloudy

This Observation
Date June 29, 1972
Time 9:30-12:15 a.m.

Last Previous Observation (Speed Report No. 89)
Date July 15, 1971
Time 10:00-1:00 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	279	277	240	259	39	13	108	106	56	49	52	57
	Ave. speed (m.p.h.)	63.31	63.83	63.53	63.66	61.97	66.28	56.69	58.17	58.46	59.69	54.8	56.86
	Standard deviation	7.79	7.112	7.52	7.151	9.29	6.182	8.27	7.750	8.37	8.439	7.80	6.914
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.4	0.0	0.0	0.0	2.6	0.0	1.9	1.89	0.0	2.04	3.9	1.75
	44 m.p.h.	0.4	0.36	0.0	0.39	2.6	0.0	5.6	3.77	1.8	2.04	9.6	5.26
	49 m.p.h.	2.9	2.53	2.1	2.32	7.7	5.56	23.2	13.21	19.6	12.24	26.9	14.04
	54 m.p.h.	10.0	9.03	9.2	9.27	15.4	5.56	38.9	28.30	35.7	22.45	42.3	33.33
	59 m.p.h.	30.1	26.71	29.2	28.19	35.9	5.56	60.2	57.55	48.2	46.94	73.1	66.67
	64 m.p.h.	58.4	54.51	57.9	56.37	61.5	27.78	86.1	81.13	82.1	73.47	90.4	87.72
	69 m.p.h.	83.2	80.51	82.5	80.69	87.2	77.78	95.4	95.28	92.9	93.88	98.1	96.49
	74 m.p.h.	92.5	93.86	92.5	93.82	92.3	94.44	97.2	98.11	94.6	95.92	100	100.0
	79 m.p.h.	96.8	98.56	96.7	98.46	97.4	100.0	100	98.11	100	95.92	100	100.0
	84 m.p.h.	98.9	98.92	99.2	98.84	97.4	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	99.6	99.64	99.6	99.61	100	100.0	100	100.0	100	100.0	100	100.0
End Bnd	No. of vehicles obs.	141	137	124	127	17	10	54	53	31	25	23	28
	Average speed	62.8	63.05	62.9	62.87	61.5	65.40	58.3	58.55	59.3	60.64	57.1	56.68
End Bnd	No. of vehicles obs.	138	140	116	132	22	8	54	53	25	24	29	29
	Average speed	63.9	64.59	64.2	64.42	62.3	67.37	55.0	57.79	57.5	58.71	52.9	57.03

TABLE 11 SPEED DATA

Station 11 Highway U.S. 31 Location 3.0 Miles South of Rochester

No. of Lanes 2 Type of Surface Asphalt Concrete Weather Partly Cloudy

This Observation
Date June 27, 1972
Time 11:50-2:20 p.m.

Last Previous Observation (Speed Report No. 89)
Date August 13, 1971
Time 11:05-1:15 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	286	279	206	230	80	49	108	105	32	30	76	75
	Ave. speed (m.p.h.)	61.36	61.90	61.40	61.60	61.25	63.29	56.41	57.03	58.94	56.97	55.34	57.05
	Standard deviation	6.22	6.824	6.71	7.072	4.78	5.362	7.55	5.438	7.94	6.568	7.17	4.964
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.95	3.1	3.33	2.6	0.0
	44 m.p.h.	0.4	0.36	0.5	0.43	0.0	0.0	8.3	0.95	6.3	3.33	9.2	0.0
	49 m.p.h.	2.8	3.23	2.9	3.91	2.5	0.0	18.5	9.52	9.4	10.00	22.4	9.33
	54 m.p.h.	12.2	13.26	13.6	15.22	8.8	4.08	31.5	22.86	21.9	23.33	35.5	22.67
	59 m.p.h.	36.7	34.41	38.4	36.09	32.5	26.53	65.7	72.38	53.1	73.33	71.1	72.00
	64 m.p.h.	71.3	67.74	68.9	69.57	77.5	59.18	88.0	92.38	78.1	86.67	92.1	94.67
	69 m.p.h.	90.2	87.81	88.4	87.83	95.0	87.76	96.3	100.0	90.6	100.0	98.7	100.0
	74 m.p.h.	98.3	95.70	97.6	94.78	100	100.0	99.1	100.0	97.6	100.0	100	100.0
	79 m.p.h.	99.3	98.57	99.0	98.26	100	100.0	100	100.0	100	100.0	100	100.0
	84 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	143	140	102	117	41	23	54	52	16	16	38	36
	Average speed	61.8	62.11	62.0	61.80	61.2	63.70	57.8	58.04	58.9	58.44	57.3	57.86
Bnd	No. of vehicles obs.	143	139	104	113	39	26	54	53	16	14	38	39
	Average speed	61.0	61.68	60.9	61.40	61.3	62.92	55.0	56.04	59.0	55.29	53.3	56.31

TABLE 12 SPEED DATA

Station 12 Highway S.R. 25 Location 0.7 Mile West of Americus

No. of Lanes 2 Type of Surface Asphalt Concrete Weather Clear

This Observation
Date June 7, 1972
Time 8:35-11:15 a.m.

Last Previous Observation (Speed Report No. 89)
Date August 13, 1971
Time 11:05:1:15 p.m.

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	238	286	221	262	17	24	110	104	53	49	57	55
	Ave. speed (m.p.h.)	58.94	60.29	59.15	60.54	56.24	57.62	53.83	54.84	56.81	56.59	51.05	53.27
	Standard deviation	7.99	7.160	7.89	7.188	9.06	6.392	7.08	6.866	7.34	7.331	5.61	6.072
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	1.9	0.0	0.0	0.0
	39 m.p.h.	1.3	0.0	1.4	0.0	0.0	0.0	2.7	0.96	3.8	2.04	1.8	0.0
	44 m.p.h.	4.2	1.75	3.6	1.53	11.8	4.17	10.0	5.77	5.7	4.08	14.0	7.27
	49 m.p.h.	9.2	6.29	8.1	5.34	23.5	16.67	24.6	23.08	11.3	14.29	36.8	30.91
	54 m.p.h.	28.2	19.23	28.1	18.70	29.4	25.00	51.8	52.88	26.4	42.86	75.4	61.82
	59 m.p.h.	52.9	46.15	51.6	46.18	70.6	45.83	77.3	77.88	64.2	69.39	89.5	85.45
	64 m.p.h.	76.1	72.03	76.0	70.23	76.5	91.67	96.4	91.35	92.5	85.71	100	96.36
	69 m.p.h.	88.7	90.21	88.2	89.31	94.1	100.0	98.2	98.08	96.2	95.92	100	100.0
	74 m.p.h.	96.6	97.55	96.4	97.33	100	100.0	100	99.04	100	97.96	100	100.0
	79 m.p.h.	100	98.95	100	98.85	100	100.0	100	100.0	100	100.0	100	100.0
	84 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0	100	100.0
Bnd	No. of vehicles obs.	120	140	109	126	11	14	59	52	34	27	25	25
	Average speed	58.9	59.43	58.7	59.92	60.6	55.00	54.9	54.08	57.0	55.96	52.0	52.04
Bnd	No. of vehicles obs.	118	146	112	136	6	10	51	52	19	22	32	30
	Average speed	59.0	61.12	59.6	61.11	48.2	61.30	52.6	55.60	56.4	57.36	50.3	54.30

TABLE 13 SPEED DATA

Station 1,2,3,4 Highway Interstate Location See Individual Stations

No. of Lanes _____ Type of Surface _____ Weather _____

This Observation
Date _____
Time _____

Last Previous Observation (Speed Report No. 89)
Date _____
Time _____

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
	No. of vehicles obs.	1131	1138	659	784	472	354	431	536	11	132	320	304
	Ave. speed (m.p.h.)	68.47	69.25	68.29	69.11	68.72	69.55	60.79	61.76	64.77	63.67	59.42	60.93
	Standard deviation	6.31	6.101	6.61	6.328	5.86	5.561	6.91	6.279	7.81	6.598	5.99	5.958
All Vehicles	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	44 m.p.h.	0.3	0.0	0.5	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.9	0.0
	49 m.p.h.	0.5	0.26	0.6	0.26	0.4	0.28	4.9	3.90	3.6	3.79	5.3	3.95
	54 m.p.h.	2.2	1.85	2.6	2.17	1.7	1.13	18.6	13.30	12.6	8.33	20.6	15.46
	59 m.p.h.	8.3	6.41	9.1	7.14	7.2	4.80	41.5	34.63	24.3	25.00	47.5	38.82
	64 m.p.h.	22.7	18.37	25.2	20.41	19.3	13.84	71.2	63.30	41.4	49.24	81.6	69.41
	69 m.p.h.	54.1	49.82	55.4	50.38	52.3	48.59	89.6	90.14	70.3	82.58	96.3	93.42
	74 m.p.h.	86.5	84.09	86.3	84.44	86.7	83.33	97.9	98.39	91.9	96.21	100	99.34
	79 m.p.h.	97.4	95.87	96.9	95.66	97.9	96.33	99.5	99.77	98.2	99.24	100	100.0
	84 m.p.h.	99.1	99.67	98.6	99.49	99.8	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	99.7	99.82	99.7	99.74	99.8	100.0	100	100.0	100	100.0	100	100.0

TABLE 14 SPEED DATA

Station 5,6,7,8 Highway 4-Lanes Location See Individual Stations

No. of Lanes _____ Type of Surface _____ Weather _____

This Observation
Date _____
Time _____

Last Previous Observation (Speed Report No. 89)
Date _____
Time _____

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	1147	1130	784	967	363	163	469	430	141	195	328	235
	Ave. speed (m.p.h.)	64.69	64.31	64.35	64.31	65.39	64.32	57.39	57.09	59.78	59.37	56.36	55.19
	Standard deviation	6.96	7.655	6.88	7.674	7.10	7.563	6.92	8.098	7.96	8.611	6.15	7.126
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.23	0.7	0.51	0.3	0.0
	39 m.p.h.	0.2	0.18	0.3	0.21	0.0	0.0	1.3	1.86	1.4	1.54	1.2	2.13
	44 m.p.h.	0.5	0.80	0.5	0.72	0.6	1.23	3.8	6.51	4.3	3.59	3.7	8.94
	49 m.p.h.	2.7	3.19	2.7	2.90	2.8	4.91	11.1	16.98	10.6	11.79	11.3	21.28
	54 m.p.h.	6.9	9.73	7.5	9.82	5.5	9.20	30.9	36.51	21.3	28.21	35.1	43.40
	59 m.p.h.	20.1	23.89	21.7	24.10	16.5	22.70	59.3	60.70	43.3	49.23	66.2	70.21
	64 m.p.h.	46.3	48.85	48.2	49.12	42.2	47.24	85.9	83.49	68.1	73.85	93.6	91.49
	69 m.p.h.	77.0	77.88	79.2	78.59	72.2	73.62	97.9	93.95	94.3	88.21	99.4	98.72
	74 m.p.h.	93.4	91.86	93.8	91.62	92.6	93.25	99.6	98.84	98.6	97.44	100	100.0
	79 m.p.h.	98.0	97.35	98.6	97.21	96.7	98.16	100	99.77	100	99.49	100	100.0
	84 m.p.h.	99.8	99.38	99.9	99.28	99.7	100.0	100	99.77	100	99.49	100	100.0
	89 m.p.h.	100	99.82	100	99.79	100	100.0	100	99.77	100	99.49	100	100.0

TABLE 15 SPEED DATA

Station 9,10,11,12 Highway 2-Lane Location See Individual Stations

No. of Lanes _____ Type of Surface _____ Weather _____

This Observation
Date _____
Time _____

Last Previous Observation (Speed Report No. 89)
Date _____
Time _____

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	1082	1133	906	1018	176	115	434	419	177	177	257	242
	Ave. speed (m.p.h.)	61.31	62.01	61.40	61.97	60.88	62.41	55.62	56.73	57.98	58.25	53.99	55.62
	Standard deviation	7.42	7.109	7.51	7.164	6.94	6.623	7.42	6.788	7.72	7.309	6.77	6.162
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.6	0.0	0.0	0.0
	39 m.p.h.	0.5	0.0	0.4	0.0	0.6	0.0	2.1	1.19	1.7	1.69	2.3	0.83
	44 m.p.h.	1.4	0.79	1.2	0.79	2.3	0.87	7.6	3.58	4.5	2.82	9.7	4.13
	49 m.p.h.	4.4	3.71	4.2	3.54	5.7	5.22	20.1	15.51	14.1	11.30	24.1	18.60
	54 m.p.h.	16.0	13.68	16.5	14.15	13.6	9.57	40.6	33.89	29.4	27.68	48.3	38.43
	59 m.p.h.	39.3	35.04	39.6	36.95	37.5	26.96	70.1	66.59	56.5	55.93	79.4	74.38
	64 m.p.h.	69.0	65.40	68.4	65.62	72.2	63.48	91.2	89.26	85.3	83.05	95.3	93.80
	69 m.p.h.	88.1	86.41	87.3	86.15	92.1	88.70	97.0	98.09	93.8	96.61	99.2	99.17
	74 m.p.h.	95.6	95.59	95.1	95.28	97.7	98.26	98.9	99.28	97.2	98.31	100	100.0
	79 m.p.h.	98.7	98.68	98.6	98.62	99.4	99.13	100	99.52	100	98.87	100	100.0
	84 m.p.h.	99.6	99.74	99.7	99.71	99.4	100.0	100	100.0	100	100.0	100	100.0
	89 m.p.h.	99.8	99.91	99.8	99.90	100	100.0	100	100.0	100	100.0	100	100.0

TABLE 16 SPEED DATA

Station 1 thru 12 Highway Indiana System Location See Individual Stations

No. of Lanes _____ Type of Surface _____ Weather _____

This Observation
Date _____
Time _____

Last Previous Observation (Speed Report No. 89)
Date _____
Time _____

		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		<5000 lbs.		>5000 lbs.	
	OBSERVATION	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
All Vehicles	No. of vehicles obs.	3360	3401	2349	2769	1011	632	1334	1285	529	504	905	781
	Ave. speed (m.p.h.)	64.87	65.20	64.31	64.81	66.16	66.90	57.91	58.56	60.33	60.10	56.77	57.56
	Standard deviation	7.49	7.607	7.58	7.684	7.11	7.018	7.39	7.453	8.27	7.961	6.64	6.931
	% of vehicles traveling at or less than 24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.08	0.5	0.20	0.1	0.0
	39 m.p.h.	0.2	0.06	0.3	0.07	0.1	0.0	1.1	1.01	1.2	1.19	1.1	0.90
	44 m.p.h.	0.7	0.53	0.8	0.54	0.6	0.47	4.1	3.35	3.3	2.38	4.4	3.97
	49 m.p.h.	2.5	2.38	2.7	2.38	2.2	2.37	12.0	12.06	10.3	9.52	12.8	13.70
	54 m.p.h.	8.2	8.41	9.6	9.25	5.1	4.75	30.1	27.78	22.4	22.82	33.7	30.99
	59 m.p.h.	22.2	21.76	25.1	23.65	15.8	13.45	57.1	53.77	43.8	45.24	63.3	59.28
	64 m.p.h.	45.7	44.16	49.6	47.06	36.7	31.49	82.9	78.52	68.3	70.63	89.8	83.61
	69 m.p.h.	72.9	71.33	75.7	73.38	66.4	62.34	94.9	94.01	87.9	89.68	98.2	96.80
	74 m.p.h.	91.8	90.50	92.2	90.94	90.7	88.61	98.8	98.83	96.3	97.42	100	99.74
	79 m.p.h.	98.0	97.29	98.1	97.29	97.7	97.31	99.9	99.69	99.5	99.21	100	100.0
	84 m.p.h.	99.5	99.59	99.5	99.49	99.7	100.0	100	99.92	100	99.80	100	100.0
	89 m.p.h.	99.9	99.85	99.8	99.82	99.9	100.0	100	99.92	100	99.80	100	100.0